

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/047317 A1

(51) International Patent Classification⁷: C07K 14/465, 14/36, C12N 15/62, 5/10

(21) International Application Number: PCT/FI2004/000679

(22) International Filing Date: 15 November 2004 (15.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 20031663 14 November 2003 (14.11.2003) FI

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

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(54) Title: AVIDIN MUTANTS

A

Signal sequence
MVKHATSPLLL LLLLSALVVA PGISARKRTG

β_5 β_6
PTFGFTVWPK FSSESTTVFTG QCFIDRNGKE

β_7 β_8
VLKTHWLLRS SVNDIGDDWK ATRVGINIF

β_1
RLRTQKEGGSGGSHARKCSLT GKTWNDLGSN

β_2 β_3
MTIGAVNSRG EFTGTYITAV TATSNEIKES

β_4 β_5
PLHGHTONTIN KSGSSTTVFT GQCFIDRNGK

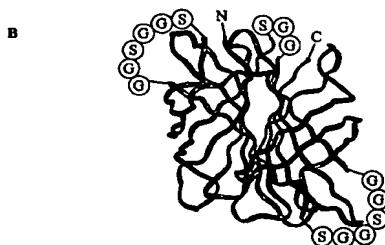
β_7 β_8
EVLKTHWLLRS SVNDIGDDWK ATRVGINIF

β_1
RLRTQKEGGSGGSHARKCSLT GKTWNDLGSN

β_2 β_3
MTIGAVNSRG EFTGTYITAV TATSNEIKES

β_4 β_5
PLHGHTONTIN KRGTOPTFGF TVWAKFSE

(57) Abstract: Two circularly permuted avidin monomers are designed. The circularly permuted monomers are fused and the resulting fusion peptides (dcAvd) form a pseudo-tetrameric dual-chain avidin, which is biologically active in biotin binding and shows similar structural characteristics as wild-type avidin. The dcAvd makes the development of dual-affinity avidins possible by allowing the adjustment of the ligand binding properties in the half of the binding sites differently than in the rest of the sites. The present invention provides further a single-chain avidin (scAvd) where two dcAvd-molecules are fused together via a linker to form a single polypeptide with four binding sites for biotin or other ligand.





TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,

Published:

- with international search report
- with amended claims

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